AMP FLIGHT SURGEON COURSE

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RAM ‘99

MISHAP INVESTIGATION

OBJECTIVES

- RECOGNIZE THE FLIGHT SURGEON'S RESPONSIBILITIES ON THE INTERIM INVESTIGATION BOARD
- RECOGNIZE THE FLIGHT SURGEON'S RESPONSIBILITIES ON THE PERMANENT INVESTIGATION BOARD

INTERIM BOARD FLIGHT SURGEON RESPONSIBILITIES

OVERVIEW

- THE INTERIM BOARD
- PREPARATION
- INITIAL RESPONSE
- SURVIVORS
- FATALITIES
- CLOSING OUT THE BOARD ACTIVITIES

THE INTERIM BOARD

- PURPOSE
  - GATHERING AND PRESERVATION OF EVIDENCE IN THE INTEREST OF MISHAP PREVENTION
- VERY INTENSE ACTIVITY
  - 48-72 HOURS
- COMPOSITION
  - MEMBERS APPOINTED FROM WITHIN THE WING
  - FLIGHT SURGEON RESPONSIBLE TO PRESIDENT
  - BOARD FLIGHT SURGEON OFTEN NEEDS ASSISTANCE FROM ANOTHER FLIGHT SURGEON

PREPARATION PLANNING

- SEARCH AND RESCUE (SAR) AGENCIES
- CHECKLIST FOR MISHAP RESPONSE
- COMMUNICATIONS
- JURISDICTION FOR FATALITIES
- MASS CASUALTY PLAN
- AFIP TOXICOLOGY

PREPARATION PLANNING (CONT'D)

- MISHAP KITS
  - LARGE AND SMALL
- PERSONAL GEAR
  - AVAILABLE NO-NOTICE
- MAPS
- AFTER-HOURS RESPONSE

INITIAL RESPONSE

- RECOVERY AND TREATMENT OF SURVIVORS - FIRST PRIORITY
- STATUS OF SAR MISSION
  - LAND VS. WATER
- AMBULANCE RESPONSE

INITIAL RESPONSE (CONT'D)

- FAMILY NOTIFICATION
- MAJCOM NOTIFICATION
- MEDICAL SUPPORT OF CRASH SITE
- IDENTITY OF SAR PERSONNEL
  - NAMES & SSN's
  - UNITS
  - PHONE NUMBER

SURVIVORS

- MEDICAL & DENTAL RECORDS
- LIFE SUPPORT GEAR
  - SECURE PYROTECHNICS
- TREAT INJURIES
- COMPLETE PHYSICAL EXAM
  - AF 1042 REQUIRED
  - DON’T RUSH TO RTFS
- EJECTION REQUIRES SPINE X-RAYS

SURVIVORS

- TOXICOLOGY
  - SHIP EXPRESS TO AFIP
  - SAVE EXTRA BLOOD
- 72-HOUR HISTORY
  - DETAILED
  - LOOK AT CREW REST, DIET, STRESSORS
- 14-DAY HISTORY
  - LESS DETAILED
  - LOOK AT CHANGES IN ROUTINE

SURVIVORS

- TELEPHONE REPORT TO MAJCOM
  - ACC REQUIRES FOUR HOUR REPORT
- RECOVERY OF EGRESS EQUIPMENT
- PRESERVATION OF LIFE SUPPORT AND EGRESS EQUIPMENT

SURVIVORS

- WRAP ITEMS IN PLASTIC & LIMIT HANDLING
  - WET ITEMS SHOULD BE DRY
  - DON’T ATTEMPT TO FIT FRACTURED METAL SURFACES TOGETHER
- DON’T ALTER ATTACHMENTS
- DON’T WASH LS EQUIPMENT!

REMAINS RECOVERY

- FRAGMENTED REMAINS
  - PHOTOGRAPH, BAG & LABEL
  - NUMBER AND LOG SPECIMENS
  - DIAGRAM LOCATION
- INTACT REMAINS
  - PHOTOGRAPH
  - DIAGRAM AND MARK LOCATION

REMAINS RECOVERY (CONT'D)

- UNDERWATER RECOVERY
- NOTIFY CORONER OR MEDICAL EXAMINER
- NOTIFY PATIENT AFFAIRS AND LAB OFFICER

PRE-AUTOPSY ACTIVITIES

- PHOTOGRAPHS
- PERSONAL EFFECTS AND VALUABLES
- TOTAL BODY X-RAYS
- IDENTIFICATION
- AUTHORITY FOR AUTOPSY
- DETERMINE WHO WILL DO THE AUTOPSY

PRE-AUTOPSY ACTIVITIES (CONT'D)

- TRANSPORTING THE REMAINS
- PHOTOGRAPHIC SUPPORT
- NOTIFY PERMANENT BOARD FLIGHT SURGEON
- FINISH 72-HOUR AND 14-DAY HISTORIES

THE AUTOPSY

- FLIGHT SURGEON SHOULD ATTEND
- SECURE LIFE SUPPORT GEAR
  - GIVE IT TO THE MISHAP BOARD
  - DON'T CLEAN ANYTHING
- GET TOXICOLOGY STUDIES
- DEATH CERTIFICATE
- GET BOARD PRESIDENT'S APPROVAL BEFORE RELEASING REMAINS

CLOSING OUT

- CHRONICLE THE SAR MISSION
- HAND-OFF TO PERMANENT BOARD FLIGHT SURGEON
  - NOTES
  - PICTURES
  - LIFE SUPPORT GEAR
  - MEDICAL RECORDS
  - DENTAL RECORDS
  - 72-HOUR AND 14-DAY HISTORIES
- LIMITED USE MATERIAL

PSYCHOLOGICAL CASUALTIES

- INITIAL RESPONDERS
- OFTEN OVERLOOKED
- DON’T FORGET YOUR MEDICS!
- ENLIST THE AID OF A PSYCHOLOGIST OR OTHER QUALIFIED COUNSELOR

INTERIM BOARD SUMMARY

- THE INTERIM BOARD
- PREPARATION
- INITIAL RESPONSE
- SURVIVORS
- FATALITIES
- CLOSING OUT THE BOARD ACTIVITIES

PERMANENT BOARD FLIGHT SURGEON DUTIES

OVERVIEW

- BOARD PURPOSE AND COMPOSITION
- PREPARATION
- GETTING STARTED
- FIRST VISIT TO THE MISHAP SITE
- INTEGRATION INTO THE INVESTIGATION
- CONSULTANTS
- WRITING THE REPORT

MIB PURPOSE

PREVENT FUTURE MISHAPS!

BOARD COMPOSITION

- REQUIRED VOTING MEMBERS:
  - PRESIDENT
  - INVESTIGATING OFFICER
  - PILOT MEMBER
  - MAINTENANCE MEMBER
  - FLIGHT SURGEON
- OPTIONAL VOTING MEMBERS:
  - LIFE SUPPORT OFFICER
  - AIR TRAFFIC CONTROLLER
  - UNIT REPRESENTATIVE
  - MUNITIONS SPECIALIST
  - WEATHER REPRESENTATIVE
  - AFOTEC REPRESENTATIVE

BOARD COMPOSITION (CONT'D)

- REQUIRED NONVOTING MEMBERS:
  - RECORDER
  - FAA OR NTSB IF THEY DESIRE PARTICIPATION
  - TEST ORGANIZATION IF INVOLVED

BOARD MEMBER SELECTION

- PRESIDENT APPOINTED BY NUMBERED AIR FORCE
- WINGS TASKED TO PROVIDE OTHER MEMBERS
- MAJCOM TASKS AMDS/CC TO PROVIDE FLIGHT SURGEON

BOARD PRESIDENTS

- BRIGADIER GENERAL WANNABES
- OG/CC OR WG/CV
- THIS IS A TEST AND HE OR SHE MUST PASS IT!
- IF THINGS ARE GOING WELL - SHIT HOT
- IF NOT - WATCH OUT

BOARD DYNAMICS

- PRESIDENT LEADS AND SETS TONE
- IO IS THE SAFETY EXPERT
- MO IS THE PARTS EXPERT
- PO IS THE FLYING EXPERT
- YOU ARE THE HF EXPERT
- YOU MAY BE THE ONLY ONE WITH ANY KNOWLEDGE OF THE SCIENTIFIC METHOD

BOARD DYNAMICS
(CONT'D)

- DON'T COMPARTMENTALIZE TOO MUCH
- INVOLVE THE ENTIRE BOARD IN HF ANALYSIS
- ALSO LOOK AT THE "PARTS"
- GET YOUR HANDS DIRTY

PERMANENT BOARD PRODUCTS

- MESSAGES
  - FINAL MESSAGE AT 30 DAYS
- BRIEFINGS
  - NUMBERED AIR FORCE
  - MAJCOM
- REPORT
  - COPIES CONTROLLED
  - LIMITED USE

PREPARATION - SUPPLIES

- USEFUL REFERENCES
  - 48-123
  - 91-204
  - 160-109
  - 127-1 VOLS I & III (OUT OF PRINT)
  - LIFE SCIENCE COMPUTER PROGRAM
  - FLIGHT SURGEON CHECKLIST
  - AEROSPACE MEDICINE TEXT
  - AEROSPACE MEDICINE PHONE DIRECTORY

PREPARATION - SUPPLIES

- USEFUL ITEMS:
  - 35MM CAMERA, FILM, FLASH
  - HAND-HELD TAPE RECORDER AND TAPES
  - ZIPLOCK BAGS AND ADHESIVE LABELS
  - EXAM GLOVES
  - WORK GLOVES
  - MOIST TOWELETTES
  - GRAPH PAPER
  - TAPE MEASURE
  - COMPASS/HANDHELD GPS

PREPARATION - SUPPLIES

- PERSONAL ITEMS
  - FLIGHT SUITS / BDUS
  - FOUL WEATHER GEAR
  - FIELD BOOTS
  - FIELD HAT
  - SUNSCREEN
  - INSECT REPELLENT
  - PERSONAL FIRST AID KIT

PREPARATION - TRAVEL

- ASSIGNED UNIT PAYS FOR THE TDY AND CUTS ORDERS
- USUALLY DEPART WITHIN 24 HOURS OF NOTIFICATION
- VARIATIONS AUTHORIZED
- RENTAL CAR

GETTING STARTED

- CONTACT BOARD PRESIDENT
- CONTACT LIFE SUPPORT MEMBER
- DEBRIEF INTERIM BOARD FLIGHT SURGEON

SURVIVING AIRCREW

- CHECK ON AFIP TOXICOLOGY
- SPINE X-RAYS IF AIRCREW EJECTED
- REVIEW MEDICAL RECORDS
- PHYSICAL EXAMINATION
  - REVIEW WHAT'S BEEN DONE
  - DO YOUR OWN EXAM
  - INCLUDE ANTHROPOMETRIC MEASUREMENTS
- COMPLETE 72-HOUR AND 14-DAY HISTORIES

FATALLY INJURED AIRCREW

- CHECK TOTAL BODY X-RAYS
- AUTOPSY ARRANGEMENTS
  - PATHOLOGIST
  - PHOTOGRAPHS
- REVIEW MEDICAL RECORDS
- ATTEND AUTOPSY
  - SECURE LIFE SUPPORT GEAR
  - DISCUSS MECHANISM OF INJURIES
  - PRELIMINARY LIST OF DIAGNOSES
  - ARRANGE FOR RECEIPT OF REPORT & PHOTOS

OTHERS INVOLVED

- OTHERS INVOLVED IN THE MISHAP
  - PHYSICAL EXAM
  - TOXICOLOGY
  - 72-HOUR AND 14-DAY HISTORY
- SEARCH AND RESCUE (SAR) INFORMATION
  - HOW NOTIFIED
  - ACCURATE TIMES
  - UNIT INVOLVED
  - INTERVIEWS

FIRST VISIT TO THE MISHAP SITE

- BIG PICTURE
- VISIT SITE OF AIRCREW RECOVERY
- LOOK AT EGRESS EQUIPMENT
  - WITH LIFE SUPPORT MEMBER
- IF AIRCRAFT IMPACTED WATER
  - CHECK WRECKAGE AS IT COMES IN
  - LOOK FOR EGRESS EQUIPMENT
  - LOOK FOR CONTROLS:
    - RUDDER PEDALS
    - THROTTLE
    - STICK HANDLE

THE INVESTIGATION

- STAY CURRENT ON FINDINGS OF OTHER BOARD MEMBERS
  - ATTEND DAILY DEBRIEFS
  - PARTICIPATE IN OR REVIEW INTERVIEWS
- BE ALERT FOR NEW PLAYERS
  - MAY NEED TOXICOLOGY
  - MAY NEED 72-HOUR OR 14-DAY HISTORIES

THE INVESTIGATION (CONT'D)

- BECOME FAMILIAR WITH CRITICAL HUMAN PERFORMANCE ACTIONS
  - REVIEW PILOT ACTIONS IN SIMULATOR
  - REVIEW MAINTENANCE:
    - WORKLOAD
    - PROCEDURES
    - ERGONOMICS
    - WRITTEN GUIDANCE

HUMAN FACTORS ANALYSIS

- HUMAN FACTORS LISTED IN 711gA
- BOARD DISCUSSION OF HUMAN FACTORS
  - FLIGHT SURGEON SHOULD OFFER TO LEAD DISCUSSION
  - START WITH YOUR OWN LIST OF POTENTIAL HUMAN FACTORS
  - USE A CONSULTANT IF NEEDED
  - REPEAT THE DISCUSSION AS MORE IS LEARNED

CONSULTANTS

- WHEN TO CONSIDER GETTING A CONSULTANT
  - THEORY YOU CANNOT CONFIRM
  - TO CHECK YOUR ANALYSIS
  - OUT OF IDEAS
- ONLY WITH THE BOARD PRESIDENT'S APPROVAL
- FINDING ONE
  - MAJCOM
  - AFSA LIFE SCIENCES
  - DIRECT
- DON'T "SELL OUT" TO THE PHYSIOLOGISTS

CONSULTANTS
(CONT'D)

- LIFE SCIENCES EQUIPMENT LAB AT KELLY AFB
  - MOST FREQUENTLY USED CONSULTANT
  - MR. MICHAEL GROST
  - DSN 945-4999
- CONSULTANT REPORT
  - USUALLY SUBMITTED IN WRITING
    - INCLUDE IN TAB Y
  - OR MAY BE INCLUDED IN LIFE SCIENCES NARRATIVE

THE REPORT

- TWO PARTS
  - PART I - TABS A-S
  - PART II - TABS T-Z (LIMITED USE)
- FLIGHT SURGEON'S RESPONSIBILITIES
  - TAB Y WITH ASSISTANCE OF LIFE SUPPORT MEMBER
  - ASSIST WITH HUMAN FACTORS PORTION OF TAB T
- COMPUTERS ARE WONDERFUL THINGS
  - REQUEST A LAP TOP
  - LET SOMEONE ELSE SWEAT THE FORMATTING

THE LIFE SCIENCES REPORT - TAB Y

- AF FORM 711gA
  - HAS BEEN REPLACED BY A DATABASE
  - START FILLING IN DATA EARLY
  - INCLUDES CONCISE SUMMARY OF NARRATIVE
  - SEND COPIES AS DIRECTED
- NARRATIVE
  - NO REQUIRED FORMAT

BASIC FORMAT

I MISHAP SCENARIO

II EGRESS
- A. DESCRIPTION OF EVENTS
- B. AIRCREW PERFORMANCE IN EGRESS
- C. FUNCTION OF EQUIPMENT

III SEARCH AND RESCUE
- A. CHRONOLOGY
- B. ANALYSIS

IV INJURIES
- A. OVERVIEW
- B. ANALYSIS

BASIC FORMAT
(CONT'D)

V AEROMEDICAL BACKGROUND
- A. AIRCREW PROFILE
- B. MEDICAL RECORD REVIEW

VI WORK AND REST HISTORY
- A. 72-HOUR HISTORY
- B. 14-DAY HISTORY
- C. ANALYSIS

VII HUMAN AND ENVIRONMENTAL FACTORS
- A. INDIVIDUAL FACTORS
- B. ENVIRONMENTAL FACTORS

SUMMARY

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- PREPARATION
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WAR STORIES
4 MIB's

- F-?? CLASSIFIED MISHAP
- F-4E LUZON, PILIPPINES
- F-15E LUKE AFB, ARIZONA
- F-16C LUKE AFB, ARIZONA

QUESTIONS?